

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10620

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B01D53/14 B01D53/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 832 936 A (HOLTER HEINZ ET AL) 23 May 1989 (1989-05-23) column 2, line 9 - line 18 column 4, line 35 - line 48; claim 1 ---	1-5
X	US 4 789 532 A (NIELSEN KIRSTEN K ET AL) 6 December 1988 (1988-12-06) column 3, line 55 - line 61 column 4, line 8 - line 16 column 4, line 30 - column 5, line 54 ---	1-5
A	US 5 492 685 A (MORAN DAVID L ET AL) 20 February 1996 (1996-02-20) column 2, line 65 - column 3, line 18 column 3, line 56 - line 65 column 4, line 28 - line 33; claims 1-5 --- -/--	1-15

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *&* document member of the same patent family

Date of the actual completion of the international search

17 February 2004

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24/02/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 90 09226 A (IMATRAN VOIMA OY) 23 August 1990 (1990-08-23) claim 1 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/10620

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4832936	A	23-05-1989	DE 3727801 A1	24-03-1988
			EP 0262396 A2	06-04-1988
			JP 63147822 A	20-06-1988
US 4789532	A	06-12-1988	DK 23586 A	18-07-1987
			AT 47967 T	15-12-1989
			CA 1300348 C	12-05-1992
			DE 3666917 D1	21-12-1989
			EP 0230139 A1	29-07-1987
			FI 870159 A	18-07-1987
US 5492685	A	20-02-1996	US 5223239 A	29-06-1993
			AU 8409891 A	18-02-1992
			CA 2087173 A1	25-01-1992
			EP 0559650 A1	15-09-1993
			WO 9201627 A1	06-02-1992
WO 9009226	A	23-08-1990	FI 890732 A	16-08-1990
			AU 4962790 A	05-09-1990
			CN 1045927 A	10-10-1990
			WO 9009226 A1	23-08-1990
			YU 29390 A1	31-10-1991